

INFORMATION PAPER

DASG-PPM-NC
28 April 2005

SUBJECT: Emerging Health Issues: Leishmaniasis among Soldiers in OIF/OEF

ARMY POSITION:

Prevention and treatment of leishmaniasis among troops deployed to Southwest Asia is a top force health protection priority for the Army.

KEY POINTS:

a. Leishmaniasis is a parasitic infectious disease transmitted by the bite of an infected sandfly found throughout tropical areas worldwide, including Southwest Asia. There are multiple species of the parasite. In the Eastern hemisphere, leishmaniasis occurs as a skin infection (cutaneous leishmaniasis-CL) or as an infection of the liver, spleen and other internal organs (visceral leishmaniasis-VL). In the Western hemisphere, it can also manifest as a mucosal infection, which can be disfiguring. Fortunately, Soldiers in Iraq and Afghanistan are not exposed to the disfiguring type of leishmaniasis.

b. Since Jan 03, there have been a total of 846 Soldiers diagnosed with CL and four with VL. Most of these infections were acquired in Iraq. Two VL cases were exposed in Iraq; the other two with VL acquired their infections in Afghanistan. One area of Iraq which appears to have a higher risk is the area west of Mosul, in and around Talafar. The Multi-National Force-Iraq Command is aware of this and emphasizes preventive measures.

BACKGROUND:

a. Sandflies that transmit leishmaniasis in Southwest Asia are active from March through November. CL is so well known in the local population, that it's called "Baghdad Boil". Although it is not possible to prevent all sandfly bites, Soldiers can do much to protect themselves by limiting opportunities that sandflies have for getting to their exposed skin. Sandflies bite at any time, but they prefer to bite at night. This is important, because if Soldiers wear little clothing at night and their skin is exposed to the elements, they are going to be bitten by sandflies. The same is true when running physical training and wearing short sleeves and shorts. Simply put, whatever skin is exposed to the air is also exposed to sandfly bites.

b. CL typically presents as one or more open skin sores that develop over weeks to months after a bite by an infected sandfly. While CL is not life threatening, the skin sores may result in permanent scarring, but not the disfiguring type of muco-cutaneous leishmaniasis which only occurs in the Western hemisphere. Visceral leishmaniasis (VL) is a more serious, potentially fatal, internal form of the disease, infecting the liver,

spleen and bone marrow. VL can occur ten days to several years after the bite of an infected sandfly.

c. Recognition and diagnosis of these infections may be delayed for weeks to months after exposure. Major emphasis is placed on educating Soldiers on identification and treatment options while deployed and afterwards.

d. As CL is a self-limited infection, small (less than 2 cm) and sparse (5 –10) lesions usually do not require any treatment. However, small lesions may be treated with liquid nitrogen. Another treatment used to treat CL is an FDA-approved device (ThermoMed™) that provides controlled localized current field radio frequency heat directly to the skin lesion.

e. Lesions which are large, numerous or which may leave a significant scar will be considered for treatment with Pentostam®. When treatment is indicated, an intravenous medication, Pentostam®, is the medication of first choice for cases of CL. It is administered under an FDA-approved Investigational New Drug (IND) protocol available in DoD only at Walter Reed or Brooke Army Medical Centers. Depending on severity, treatment lasts ten to twenty days. Although this treatment is very effective, it is not a benign drug and significant side effects may include muscle and joint pain and pancreatic inflammation, all of which resolve after treatment is stopped.

f. Patients diagnosed with VL are treated with an appropriate FDA-approved anti-leishmanial drug, such as liposomal amphotericin B.

g. Although no cases of transfusion-acquired leishmaniasis have been reported in the US, all US personnel deployed to Southwest Asia are deferred from donating blood for 12 months after redeployment. Individuals diagnosed with leishmaniasis incur a lifetime prohibition on donating blood.

h. Since there are no vaccines or medications effective for prevention of leishmaniasis, troop commanders must emphasize the use of personal protective measures. This disease can be prevented only through protection from the bite of infected sandflies through proper use of barriers. These include application of repellent lotion containing DEET, proper wear of permethrin-treated uniforms, and sleeping under permethrin-treated bed nets or within screened enclosures. Preventing leishmaniasis depends on preventing sandfly bites. Worldwide, there are over 2 million new cases of leishmaniasis each year. Therefore, it should not be surprising that where there are sandflies and exposed skin, there will be leishmaniasis. Thus, if Soldiers have exposed skin and sustain sandfly bites, they will become infected with leishmaniasis.

i. The unit Field Sanitation Team (FST) assists unit commanders in protecting Soldiers from sandflies and sand fly-transmitted diseases by stocking personal protective materials for individual use (DEET, IDA kits), and by applying an insecticide to kill the flies using 2-gallon pesticide sprayers with demand pesticide tablets. These teams also

DASG-PPM-NC

SUBJECT: Leishmaniasis Among Soldiers Deployed to Southwest Asia

stock 12-ounce aerosol cans of approved insecticides for use in sleeping and work spaces.

Mr. Paul Repaci/DASG-PPM-NC/703.681.2949

Approved by: COL Underwood/703.681.3130